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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/573,006	03/21/2006	Davood Molkdar	CE10922EP	5051
22917	7590	11/20/2007	EXAMINER	
MOTOROLA, INC. 1303 EAST ALGONQUIN ROAD IL01/3RD SCHAUMBURG, IL 60196			REGO, DOMINIC E	
			ART UNIT	PAPER NUMBER
			2618	
			NOTIFICATION DATE	DELIVERY MODE
			11/20/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

Docketing.Schaumburg@motorola.com
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Office Action Summary	Application No. 10/573,006	Applicant(s) MOLKDAR ET AL.	
	Examiner Dominic E. Rego	Art Unit 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 and 13-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 10, 11, 13 and 14 is/are rejected.
- 7) ☒ Claim(s) 8, 9 and 15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>03/21/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2618

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-7,10,11,13, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dajer et al. (US Patent #6,094,585) in view of Gerogiokas et al. (US 2003/0022693) and further in view of Englund et al. (WO 03/096571).

Regarding claim 1, Dajer teaches a method of generating downlink power information for a multi-sector base transceiver site in which power can be shared between existing amplifiers of the sectors (Col 1, lines 28-39), the method comprising the steps:

gathering downlink power information for each sector (Col 3, line 14-Col 4, line 3, especially, Col 3, line 48-Col 4, line 3; Col 4, line 66-Col 5, line 20), except for when the total power required by the sectors is less than the total power available from the base transceiver site, modifying the gathered downlink power information for each sector to pre-empt traffic loading such that a more heavily loaded sector will be disproportionately allocated more power than a less heavily loaded sector;

forwarding the modified downlink power information to an overload control module and a radio resource manager controlling the multi-sector base transceiver site; and

determining a loading of each sector using the modified downlink power information, wherein the power to each sector is adjusted disproportional to the degree with which the sector is loaded.

However, in related art, Gerogiokas teaches when the total power required by the sectors is less than the total power available from the base transceiver site, modifying the gathered downlink power information for each sector to pre-empt traffic loading such that a more heavily loaded sector will be disproportionately allocated more power than a less heavily loaded sector; determining a loading of each sector using the modified downlink power information, wherein the power to each sector is adjusted disproportional to the degree with which the sector is loaded (Paragraphs 0008, 0018-0021).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the above teaching of Gerogiokas to Dajer, in order to determine the capacity demands of the various portions of a communication system.

The combination of Dajer and Gerogiokas fail to teach forwarding the modified downlink power information to an overload control module and a radio resource manager controlling the multi-sector base transceiver site.

However, in related art, Englund teaches forwarding the modified downlink power information to an overload control module and a radio resource manager controlling the multi-sector base transceiver site (Figure 5, base stations 24 forwarding the modified downlink power information to an overload control module and a radio resource manager controlling the multi-sector base transceiver site; Also see page 12, lines 5-12).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the above teaching of Englund to Dajer and Gerogiokas, in order to maintain downlink service constant with different users.

Regarding claim 2, the combination of Dajer, Gerogiokas, and Englund teach all the claimed elements in claim 1. In addition, Gerogiokas teaches the method wherein the step of modifying the gathered downlink power information is carried out on the downlink power information for one or more of the sectors (Paragraphs 0008, 0018-0021).

Regarding claim 3, the combination of Dajer, Gerogiokas, and Englund teach all the claimed elements in claim 1. In addition, Gerogiokas teaches the method wherein the modification carried out in the step of modifying the gathered downlink power information depends on the relative magnitude of the total gathered power and the available power of the multi-sector base transceiver site (Paragraphs 0008, 0018-0021).

Regarding claim 4, the combination of Dajer, Gerogiokas, and Englund teach all the claimed elements in claim 1. In addition, Gerogiokas teaches the method wherein the step of modifying the gathered downlink power information results in the allocation by the radio resource manager of spare capacity from lightly loaded sectors to more heavily loaded sectors (Paragraphs 0008, 0018-0021).

Regarding claim 5, the combination of Dajer, Gerogiokas, and Englund teach all the claimed elements in claim 1. In addition, Gerogiokas teaches the method, wherein the step of modifying the gathered downlink power results in the amount of spare

capacity allocated to a sector being related to the degree of loading or overloading of the sector (Paragraphs 0008, 0018-0021).

Regarding claim 6, the combination of Dajer, Gerogiokas, and Englund teach all the claimed elements in claim 4. In addition, Gerogiokas teaches method wherein the evaluation of respective loading on sectors is determined with regard to information relating to the loading of the sector determined by a multi-band filter (Paragraphs 0008,0012, 0018-0021).

Regarding claim 7, the combination of Dajer, Gerogiokas, and Englund teach all the claimed elements in claim 1. In addition, Gerogiokas teaches the method wherein the step of modifying the gathered downlink power information results in the modified power information for a more heavily loaded sector being less than the modified power information of a less heavily loaded sector (Paragraphs 0008,0012, 0018-0021).

Regarding claim 10, the combination of Dajer, Gerogiokas, and Englund teach all the claimed elements in claim 1. In addition, Gerogiokas teaches the method wherein average loading and/or variance power requirements information is used in determining how to modify the gathered power information (Paragraphs 0008,0012, 0018-0022).

Regarding claim 11, the combination of Dajer, Gerogiokas, and Englund teach all the claimed elements in claim 8. In addition, Gerogiokas teaches the method wherein average load and/or variance information is obtained from multi-band filters applied to the gathered power requirements (Paragraphs 0008,0012, 0018-0022).

Regarding claim 13, Dajer teaches an apparatus for generating downlink power information for a multi-sector base transceiver site in which power can be shared between existing amplifiers of the sectors (Col 1, lines 28-39), the apparatus comprising:

a power scaling module for modifying gathered downlink power information for each sector (Col 3, line 14-Col 4, line 3, especially, Col 3, line 48-Col 4, line 3; Col 4, line 66-Col 5, line 20), except to preempt traffic loading such that a more heavily loaded sector will be allocated more power than a less heavily loaded sector when the total power required by the sectors is less than the total power available from the base transceiver site; and

an overload control module and a radio resource manager controlling the multi-sector base transceiver site, the overload control module and a radio resource manager for receiving the modified power information from the power scaling module, wherein the overload control module determines a loading of each sector using the modified downlink power information, and the radio resource manager adjusts the power to each sector disproportional to the degree with which the sector is loaded.

However, in related art, Gerogiokas teaches to preempt traffic loading such that a more heavily loaded sector will be allocated more power than a less heavily loaded sector when the total power required by the sectors is less than the total power available from the base transceiver site; adjusts the power to each sector disproportional to the degree with which the sector is loaded (Paragraphs 0008, 0018-0021).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the above teaching of Gerogiokas to Dajer, in order to determine the capacity demands of the various portions (sectors) of a communication system.

The combination of Dajer and Gerogiokas fail to teach forwarding the modified downlink power information to an overload control module and a radio resource manager controlling the multi-sector base transceiver site.

However, in related art, Englund teaches forwarding the modified downlink power information to an overload control module and a radio resource manager controlling the multi-sector base transceiver site, the overload control module and a radio resource manager for receiving the modified power information from the power scaling module, wherein the overload control module determines a loading of each sector using the modified downlink power information (Figure 5, base stations 24 forwarding the modified downlink power information to an overload control module and a radio resource manager controlling the multi-sector base transceiver site; Also see page 12, lines 5-12).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the above teaching of Englund to Dajer and Gerogiokas, in order to maintain downlink service constant with different users.

Regarding claim 14, the combination of Dajer, Gerogiokas, and Englund teach all the claimed elements in claim 13. In addition, Gerogiokas teaches the apparatus

Art Unit: 2618

further comprising a power measurement module for gathering downlink power information (Paragraphs 0008, 0018-0021).

Allowable Subject Matter

4. Claims 8,9, and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 8, the prior art of records fail to teach the method wherein the step of modifying gathered downlink power information results in the sum of the reported powers for the sectors becoming greater than the sum of the gathered powers for the sectors, if the sum of the gathered powers is greater than a threshold power.

Regarding claim 15, the prior art of records fail to teach the apparatus further comprising the overload control module operably coupled to the power scaling module, wherein the thresholds used by the overload control module determine an overload in one or more sectors depending at least partly on the modified downlink power information.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dominic E. Rego whose telephone number is 571-272-8132. The examiner can normally be reached on Monday-Friday, 8:30 am-5 pm.

Art Unit: 2618

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on 571-272-7882. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Dominic E. Rego



QUOCHIEN B. VUONG
PRIMARY EXAMINER